

Permanent Wood Foundation

City of Willmar Building Department (2015 MSBC)

A maximum backfill depth of 48 inches is allowed without the foundation plans being designed by a Minnesota Licensed Structural Engineer.

This list does not contain code compliance items pertaining to every building scenario. Other items may be required that are specific to your wood foundation system.

Pan flashing is required under all exterior doors and windows.

Foundation grade plywood sheathing. All plywood joints are to be sealed their full length and width with acrylic latex or polyurethane caulking. This is applied prior to installing the adjacent panels.

Seal with high-performance acrylic latex or polyurethane caulking.

1 x 12 treated grade board minimum (may be either plywood or nominal lumber).

Finished grade must slope a minimum of 6 inches over the first 10 feet.

Install a 6 mil polyethylene film, spot bond the polyethylene film to the plywood sheathing with butyl rubber adhesive/caulk. Lap the vertical joints 6 inch minimum and seal them with the adhesive/caulk.

Fasteners used below grade to attach plywood to the exterior side of exterior basement or crawlspace wall studs, or in knee wall construction must be of type 304 or 316 stainless steel.

Maintain a 2 inch separation between the bottom plate and the fiberglass insulation.

Wood foundation materials, fasteners and treatment as detailed in section R402.1, R402.1.1 and R402.1.1. Footings for wood foundations shall be in compliance with tables R403.1(2) and R403.1(3). Gravel shall be washed and well graded. The maximum size stone shall not exceed $\frac{3}{4}$ inch. Gravel shall be free from organic, clayey or silty soils. Sand shall be coarse, not smaller than $\frac{1}{16}$ inch grains and shall be free from organic, clayey or silty soils. Crushed stone shall have a maximum size of $\frac{1}{2}$ inch.

Crush blocking is required on all load bearing headers continuous to the foundation footer plate.

Framing anchors will be required attaching the joist to plates and studs to plates.

2x8, 2x10 or 2x12 inch foundation grade treated studs. Stud size and spacing is determined by soil type and backfill depth. Install fiberglass insulation, energy type electrical boxes, sealed 4 mil vapor retarder and $\frac{1}{2}$ inch gypsum board.

Drilling thru the studs for electrical wiring and plumbing pipes is not permitted. (you must drill thru the top plates).

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The concrete slab must be a minimum of $3\frac{1}{2}$ inches in thickness and have a 6 mil vapor barrier installed between the concrete floor and the grade below.

In new single family dwellings you are required to provide a radon mitigation system.

1x4 screed board (optional).

The depth of the rock under the footer plate must be a minimum of three quarters the width of the footer plate. The width of the rock base under the footer plate must be at least twice the width of the footer plate.

Provide a sealed sump basket.

